ABSTRACT

A time-shared network comprising edge nodes and optical core nodes may be dynamically divided into several embedded networks, each of which covering selected edge nodes. At least one of the edge nodes may host an embedded-network controller operable to form multiple-source flow-rate allocation requests each of the requests specifying flow-rate allocations to a plurality of paths from several source nodes to several sink nodes. A core node may also host an embedded-network controller or several embedded-network controllers. The time-shared network may use both time-division multiplexing and burst switching.